

CLAIMS

1. A method of managing resources in a radio communication network (101), the radio communication network comprising a first set of equipment (201, 205) and a second set of equipment
5 (202, 206),

the method comprising the steps of:

allocating (301) the first set of equipment (201, 205) to serve a first call;

performing equipment reallocation (303), whereby the second set
10 of equipment (202, 206) is allocated to serve the first call and the first set of equipment (201, 205) is released from the first call;

c h a r a c t e r i z e d in that the step of performing equipment reallocation is initiated upon determining (302),
15 according to a predetermined rule based on differences in functional capabilities of the first set of equipment (201, 205) and the second set of equipment (202, 206), that it is desirable to serve the first call using the second set of equipment (202, 206) instead of the first set of equipment (201, 205) even
20 though the first set of equipment (201, 205) is able to continue serving the first call.

2. A method according to claim 1, wherein at least one difference in functional capabilities of the first set of equipment (201, 205) and the second set of equipment (202, 206)
25 is that the first set of equipment (201, 205) supports at least one communication service configuration not supported by the second set of equipment (202, 206).

Claim 1
3. A method according to ~~any one of claims 1-2~~, wherein at least one difference in functional capabilities of the first set of
30 equipment (201, 205) and the second set of equipment (202, 206)

is that the second set of equipment (202, 206) is capable of handling a larger number of simultaneous calls having a certain communication service configuration.

*a*⁵ 4. A method according to ~~any one of claims 1-3~~ ^{Claim 1}, wherein the step of performing equipment reallocation involves initiating a handover of the first call.

5. A method according to claim 4, wherein the handover of the first call is a handover from a first cell (C1) to a second cell (C2).

10 a 6. A method according to ~~any one of claims 1-4~~ ^{Claim 4}, wherein the handover of the first call is an intra cell handover of the first call in a first cell (C1).

*a*¹⁵ 7. A method according to ~~any one of claims 1-6~~ ^{Claim 1}, wherein the first set of equipment (201, 205) is configured to handle a first set of communication channels and the second set of equipment (202, 206) is configured to handle a second set of communication channels and wherein allocation of the first set of equipment (201, 205) to serve a call is performed by allocating a communication channel in the first set of communication channels to the call and release of the first set of equipment (201, 205) from a call is performed by releasing a communication channel in the first set of communication channels from the call while allocation of the second set of equipment (202, 206) to serve a call is performed by allocating a communication channel in the second set of communication channels to the call and release of the second set of equipment (202, 206) from a call is performed by releasing a communication channel in the second set of communication channels from the call.

*a*³⁰ 8. A method according to ~~any one of claims 1-7~~ ^{Claim 1}, wherein the first set of equipment (201, 205) includes a first type of

transceiver (201) and the second set of equipment (202, 206) includes a second type of transceiver (202).

a 9. A method according to ^{*claim 1*} ~~any one of claims 1-8~~, wherein the first set of equipment (201, 205) includes a first type of transcoder (205) and the second set of equipment (202, 206) includes a second type of transcoder (206). *1*

10. A method according to any one of claims ~~1-9~~, wherein the step of determining is performed upon release of the second set of equipment (202, 206) from a second call.

*a*¹⁰ 11. A method according to ^{*claim 2*} ~~any one of claims 2-9~~, wherein the step of determining is performed upon receiving a request for a third call which requires allocation of equipment supporting a communication service configuration not supported by the second set of equipment (202, 206) but which is supported by the first set of equipment (201, 205) and the method further comprises a step of allocating the first set of equipment (201, 205) to serve the third call after being released from the first call.

a 12. A method according to ^{*2*} ~~claim 2-9~~, wherein the method comprises a step of monitoring available equipment supporting different communication service configurations and wherein the step of determining is performed upon detecting that, for at least one communication service configuration included in the at least one communication service configuration not supported by the second set of equipment (202, 206), there is no available equipment.

a 13. A method according to ^{*claim 1*} ~~any one of claims 1-12~~, wherein said determining involves determining that it is desirable to serve a current communication service configuration of the first call using the second set of equipment (202, 206) instead of the first set of equipment (201, 205) even though the first set of equipment (201, 205) is capable of handling the current communication service configuration of the first call.

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14. A method according to ~~any one of claims 1-9,~~ ^{claim 1} wherein said determining is performed upon changing communication service configuration of the first call to a new communication service configuration and said determining involves determining that it is desirable to serve the new communication service configuration of the first call using the second set of equipment (202, 206) instead of the first set of equipment (201, 205) even though the first set of equipment (201, 205) is capable of handling the new communication service configuration of the first call.

15. A method according to claim 14, wherein said determining is performed upon changing communication service configuration of the first call from a communication service configuration not supported by the second set of equipment (202, 206) to a communication service configuration supported by the second set of equipment (202, 206).

16. A control apparatus (MSC1) for managing resources in a radio communication network (101), the radio communication network (101) comprising a first set of equipment (201, 205) and a second set of equipment (202, 206), the control apparatus comprising:

allocating means (208) for allocating the first set of equipment (201, 205) to serve a first call;

characterized in that the control apparatus further comprises:

determining means (208) for determining, according to a predetermined rule based on differences in functional capabilities of the first set of equipment (201, 205) and the second set of equipment (202, 206), that it is desirable to serve the first call using the second set of equipment (202, 206) instead of the first set of equipment (201, 205) currently

allocated to serve the call even though the first set of equipment (201, 205) is able to continue serving the first call; equipment reallocation means (208) for performing equipment reallocation, whereby the second set of equipment (202, 206) is allocated to serve the first call and the first set of equipment (201, 205) is released from the first call, upon said determining by the determining means (208).

17. A control apparatus (MSC1) according to claim 16, wherein at least one difference in functional capabilities of the first set of equipment (201, 205) and the second set of equipment (202, 206) is that the first set of equipment (201, 205) supports at least one communication service configuration not supported by the second set of equipment (202, 206).

a 18. A control apparatus (MSC1) according to ^{*claim 16*} ~~any one of claims 16-17~~, wherein at least one difference in functional capabilities of the first set of equipment (201, 205) and the second set of equipment (202, 206) is that the second set of equipment (202, 206) is capable of handling a larger number of simultaneous calls having a certain communication service configuration.

a 19. A control apparatus (MSC1) according to ^{*claim 16*} ~~any one of claims 16-18~~, wherein the equipment reallocation means (208) are adapted to perform said equipment reallocation by initiating a handover of the first call.

20. A control apparatus (MSC1) according to claim 19, wherein the handover of the first call is a handover from a first cell (C1) to a second cell (C2).

21. A control apparatus (MSC1) according to claim 19, wherein the handover of the first call is an intra cell handover of the first call in a first cell (C1).

9 22. A control apparatus (MSC1) according to ^{claim 16} ~~any one of claims 16-21~~, wherein the first set of equipment (201, 205) includes a first type of transceiver (201) and the second set of equipment (202, 206) includes a second type of transceiver (202).

5 23. A control apparatus (MSC1) according to ^{claim 16} ~~any one of claims 16-22~~, wherein the first set of equipment (201, 205) includes a first type of transcoder (205) and the second set of equipment (202, 206) includes a second type of transcoder (206).

10 24. A control apparatus (MSC1) according to ^{claim 16} ~~any one of claims 16-23~~, wherein the determining means (208) are adapted to perform said determining upon release of the second set of equipment (202, 206) from a second call.

15 25. A control apparatus (MSC1) according to ^{claim 17} ~~any one of claims 17-23~~, wherein the determining means (208) are adapted to perform said determining upon the radio communication network receiving a request for a third call which requires allocation of equipment supporting a communication service configuration not supported by the second set of equipment (202, 206) but which is supported by the first set of equipment (201, 205) and
20 wherein the allocating means (208) are adapted to allocate the first set of equipment (201, 205) to serve the third call after it has been released from the first call.

25 26. A control apparatus (MSC1) according to ^{claim 17} ~~any one of claims 17-23~~, wherein the determining means (208) are adapted to monitor available equipment supporting different communication service configurations and wherein said determining is performed upon detecting that, for at least one communication service configuration included in the at least one communication service configuration not supported by the second set of equipment (202,
30 206), there is no available equipment.

27. A control apparatus (MSC1) according to ^{claim 16} ~~any one of claims 16-26~~, wherein said determining involves determining that it is

desirable to serve a current communication service configuration of the first call using the second set of equipment (202, 206) instead of the first set of equipment (201, 205) even though the first set of equipment (201, 205) is capable of handling the current communication service configuration of the first call.

28. A control apparatus (MSC1) according to ~~any one of claims 16-23,~~ ^{claim 16} wherein the determining means (208) are adapted to perform said determining upon change of communication service configuration of the first call to a new communication service configuration and said determining involves determining that it is desirable to serve the new communication service configuration of the first call using the second set of equipment (202, 206) instead of the first set of equipment (201, 205) even though the first set of equipment (201, 205) is capable of handling the new communication service configuration of the first call.

29. A control apparatus (MSC1) according to claim 28, wherein the determining means (208) are adapted to perform said determining upon change of communication service configuration of the first call from a communication service configuration not supported by the second set of equipment (202, 206) to a communication service configuration supported by the second set of equipment (202, 206).

30. A radio communication network (101) comprising a control apparatus according to ~~any one of claims 16-29,~~ ^{claim 16}